

WHAT IS CLAIMED IS:

1. An autothermal reforming apparatus comprising:
- (a) a combustion chamber;
 - (b) at least one catalytic reactor;
 - 5 (c) a duct for leading combustion product from the combustion chamber to the catalytic reactor or reactors; and
 - (d) withdrawal ducts for withdrawing the product of the catalytic reactor or reactors.

2. An autothermal reforming apparatus according to claim 1, wherein said combustion chamber is provided in the bottom thereof with a burner having inlets for feed and oxidant.

3. An autothermal reforming apparatus according to claim 1, wherein said combustion chamber is provided in the top thereof for outlet means communicating with said duct.

- 5 4. An autothermal reforming process comprising combusting a hydrocarbon and steam feed with an oxidant to produce a combustion product, withdrawing the combustion product, introducing it into one or more reactors, catalytically reforming it to produce a
- 10 reformat and withdrawing the reformat.